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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/334,891	06/17/1999	GUIDO GHISOLFI	32461/GM/1P	5842

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EXAMINER	
PATTERSON, MARC A	

ART UNIT	PAPER NUMBER
1772	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/334,891	GHISOLFI, GUIDO	
	Examiner	Art Unit	
	Marc A Patterson	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-21,23,24,28,30-34,36 and 38-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18-21,23,24,28,30-34,36 and 38-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

WITHDRAWN REJECTIONS

1. The 35 U.S.C. 103(a) rejection of Claims 23 – 24, 29 – 33 and 35 – 36 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Hayashi (U.S. Patent No. 5,000,991) and Nankee et al (U.S. Patent No. 4,543,364), of record on page 2 of the previous Action, is withdrawn.

The 35 U.S.C. 103(a) rejection of Claims 18 – 21 and 25 – 27 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Hayashi (U.S. Patent No. 5,000,991) and Nankee et al (U.S. Patent No. 4,543,364) and further in view of Hubbard et al (WO 97/47694), of record on page 5 of the previous Action, is withdrawn.

The 35 U.S.C. 103(a) rejection of Claims 28 and 34 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Hayashi (U.S. Patent No. 5,000,991) and Nankee et al (U.S. Patent No. 4,543,364) and further in view of The Encyclopedia of Polymer Science and Engineering. (Volume 12, page 214, 1985), of record on page 6 of the previous Action, is withdrawn.

NEW REJECTIONS

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 23 – 24, 30 – 33, 36, 38 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Harfmann (U.S. Patent No. 5,681,865) and Nankee et al (U.S. Patent No. 4,543,364).

With regard to Claims 23 – 24, 38 and 43, Roulin et al disclose a container for food (column 3, lines 33 – 40) comprising a multi – layer material (column 6, lines 17 – 24) the material comprising a layer of a foamed sheet comprising polyester (column 3, lines 54 – 63), and, adhered to the foamed sheet, a film of polyester resin which is heat – sealable column 3, lines 54 – 63); the multi – layer material comprises creased lines (column 7, lines 4 – 14); the polyester film is made to adhere to the foamed sheet by hot lamination (heat sealing; column 6, lines 17 – 23). With regard to the claimed aspect of the polyester being 'aromatic,' Roulin et al teach the use of polyethylene terephthlate as a polyester of the invention (column 5, lines 13 – 19); the claimed aspect of the polyester being 'aromatic' therefore reads on Roulin et al. Roulin et al fails to disclose a foamed sheet having a density of less than 700 kg/m^3 and a crystallinity lower than 15% and a container that is recyclable.

Harfmann teaches the use of a foamed sheet having a density of less than 700 kg/m^3 (column 8, lines 50 – 52) and crystallinity lower than 15% (column 8, lines 20 – 22) in the making of a container for food (column 1, lines 11 – 13), for the purpose of obtaining good quality foam (column 8, lines 50 – 52). One of ordinary skill in the art would therefore have recognized the advantage of providing for the density of less than 700 kg/m^3 and crystallinity lower than 15% of Harfmann in Roulin et al, which is a container for food, depending on the desired quality of the foam of the end product.

Nankee teaches that it well known in the art to use a recyclable polyester in the making of containers (column 1, lines 5 – 40) for the purpose of obtaining a container which is clear (column 1, lines 41 – 45). One of ordinary skill in the art would therefore have recognized the advantage of providing for the recyclable polyester of Nankee in Roulin et al, which is a container, depending on the desired clarity of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a density of less than 700 kg/m^3 in Roulin et al in order to obtain good quality foam as taught by Harfmann and to have provided for a recyclable polyester (therefore a recyclable container) in Roulin et al in order to obtain a container which is clear as taught by Nankee.

Roulin et al also fail to disclose a polyester film having a melting point of 50 to 200 degrees Celsius. However, Roulin et al discloses a film having a melting point greater than 500 degrees Fahrenheit (column 6, lines 46 – 50) and teaches that the film is selected depending on the desired heat seal temperature (column 6, lines 46 – 50). Therefore, one of ordinary skill in the art would have recognized the utility of varying the melting point to obtain a desired heat seal temperature. Therefore, the heat seal temperature would be readily determined through routine optimization of melting point by one having ordinary skill in the art depending on the desired end use of the product.

It therefore would be obvious for one of ordinary skill in the art to vary the melting point in order to obtain a desired heat seal temperature, since the heat seal temperature would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Roulin et al.

With regard to Claims 30 – 31, as discussed above, the foamed sheet disclosed by Roulin has a density less than 700 kg/m^3.

With regard to Claims 32 – 33, Roulin et al fails to disclose a container having a thickness from 0.2 to 3 mm. However, Roulin et al disclose a container having a thickness of greater than 200 microns (layer thickness of 200 microns; column 8, lines 38 – 48) and teach the selection of thickness to obtain desired barrier properties (column 8, lines 45 – 46). Therefore, one of ordinary skill in the art would have recognized the utility of varying the thickness of the layer to obtain desired barrier properties. Therefore, the barrier properties would be readily determined through routine optimization of thickness by one having ordinary skill in the art depending on the desired end use of the product.

It therefore would be obvious for one of ordinary skill in the art to vary the thickness in order to obtain desired barrier properties, since the barrier properties would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Roulin et al.

With regard to Claims 24 and 36, Roulin et al fail to disclose a container in which the heat sealable film comprises two layers, and in which the polyester film is adhered on two sides of the foamed sheet. However, Roulin et al disclose a container in which the heat sealable film comprises one layer, and in which the polyester film is adhered on one side of the foamed sheet, as discussed above. It would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to have provided for additional layers, adhered to additional sides of the sheet, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

With regard to the claimed aspect in Claims 24 and 36 of the film being 'coextruded,' the film disclosed by Roulin et al is coextruded (column 5, lines 62 – 65).

4. Claims 18 – 21 and 39 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Harfmann (U.S. Patent No. 5,681,865) and Nankee et al (U.S. Patent No. 4,543,364) and further in view of Hubbard et al (WO 97/47694).

Roulin et al, Harfmann and Nankee disclose a multi – layer material comprising a heat – sealable film as discussed above. With regard to Claims 18 – 19 and 21, Roulin et al, Hayashi and Nankee fail to disclose a heat – sealable film which is coated with potassium or lithium polysilicates, and having an oxygen permeation rate lower than 70 $ml/m^3/24h/atm$.

Hubbard et al teach the metallization of polyester with lithium polysilicate (page 10, lines 5 – 24) for the purpose of obtaining a film having an oxygen permeation rate lower than 70 $ml/m^3/24h/atm$ (page 21, lines 17 – 30). One of ordinary skill in the art would therefore have recognized the advantage of providing for metallization with the lithium polysilicate of Hubbard et al in Roulin et al, Harfmann and Nankee, which is a film for containing food, depending on the desired oxygen permeation rate of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for lithium polysilicate (which is also silicon oxide) in Roulin et al, Harfmann and Nankee in order to obtain a film having an oxygen permeation rate lower than 70 $ml/m^3/24h/atm$ as taught by Hubbard et al.

With regard to Claim 20, Hubbard et al fail to disclose an oxygen permeation rate lower than 0.3 ml/m^3/24h/atm. However, Hubbard et al disclose an oxygen permeation rate lower than 287 ml/m^3/24h/atm. (page 23, lines 1 – 8) and teach the selection of oxygen permeation rate to obtain a film that resists the loss of its barrier properties due to flexing (page 4, lines 16 – 21) Therefore, one of ordinary skill in the art would have recognized the utility of varying the oxygen permeation rate to obtain a desired resistance to loss of barrier properties. Therefore, the resistance to loss of barrier properties would be readily determined through routine optimization of oxygen permeation rate by one having ordinary skill in the art depending on the desired end use of the product.

It therefore would be obvious for one of ordinary skill in the art to vary the oxygen permeation rate in order to obtain a desired resistance to loss of barrier properties, since the resistance to loss of barrier properties would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Hubbard et al.

With regard to Claims 39 – 41, the film taught by Hubbard et al is coated with a layer of aluminum oxide, therefore aluminum (page 6, lines 5 – 6).

5. Claims 28, 34 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Harfmann (U.S. Patent No. 5,681,865) and Nankee et al (U.S. Patent No. 4,543,364) and further in view of The Encyclopedia of Polymer Science and Engineering. (Volume 12, page 214, 1985).

Roulin et al, Harfmann and Nankee disclose a multi – layer material comprising a heat – sealable film as discussed above. With regard to Claims 28, 34 and 42, Roulin et al, Harfmann and Nankee fail to disclose a heat sealable film which is a polyethylene terephthalate – isophthalate copolymer.

The Encyclopedia of Polymer Science and Engineering (Volume 12, page 214, 1985) teaches that it is known in the art to use polyethylene terephthalate – isophthalate copolymer instead of polyethylene terephthalate as the outer layer of a heat sealable polyester film for the purpose of obtaining a film having a lower softening and melting point. The desirability of providing for polyethylene terephthalate – isophthalate copolymer in Roulin et al, Hayashi and Nankee, which comprises a heat – sealable polyester film, would therefore be obvious to one of ordinary skill in the art.

It would therefore have been obvious to one of ordinary skill in the art to use a polyethylene terephthalate – isophthalate copolymer (thus an aromatic polyester obtained by polycondensation of a copolyethylene terephthalate in which at least 1 mole percent of the units deriving from therephthalic acid are substituted by units derived from isophthalic acid) as the outer layer of the heat sealable film in Roulin et al, Harfmann and Nankee in order to obtain a package which is heat sealable at a lower temperature.

The Encyclopedia of Polymer Science and Engineering fails to disclose an aromatic polyester obtained by polycondensation of a copolyethylene terephthalate in which 10 mole percent of the units deriving from terephthalic acid are substituted by units derived from isophthalic acid and 10 mole percent of the units deriving from terephthalic acid are substituted by units derived from isophthalic acid. However, The Encyclopedia of Polymer Science and

Engineering discloses a copolyethylene terephthalate in which at least 1 mole percent of the units deriving from terephthalic acid are substituted by units derived from isophthalic acid as discussed above. Therefore, the amount of units derived from isophthalic acid would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary amount of units derived from isophthalic acid, since amount of units derived from isophthalic acid would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by The Encyclopedia of Polymer Science and Engineering *In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980).*

ANSWERS TO APPLICANT'S ARGUMENTS

6. Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claims 16 – 17, 23 – 24, 29 – 33 and 35 – 37 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Hayashi (U.S. Patent No. 5,000,991) and Nankee et al (U.S. Patent No. 4,543,364), 35 U.S.C. 103(a) rejection of Claims 18 – 21 and 25 – 27 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Hayashi (U.S. Patent No. 5,000,991) and Nankee et al (U.S. Patent No. 4,543,364) and further in view of Hubbard et al (WO 97/47694) and Claims 28 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Hayashi (U.S. Patent No. 5,000,991) and Nankee et al (U.S. Patent No. 4,543,364) and further in view of The Encyclopedia of Polymer Science and Engineering. (Volume 12, page 214, 1985), of record in the previous Action, have been considered and have been found to be persuasive. The rejections have therefore been withdrawn. The new 35 U.S.C.

103(a) rejection of Claims 23 – 24, 30 – 33, 36, 38 and 43 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Harfmann (U.S. Patent No. 5,681,865) and Nankee et al (U.S. Patent No. 4,543,364), 35 U.S.C. 103(a) rejection of Claims 18 – 21 and 39 – 41 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Harfmann (U.S. Patent No. 5,681,865) and Nankee et al (U.S. Patent No. 4,543,364) and further in view of Hubbard et al (WO 97/47694) and 35 U.S.C. 103(a) rejection of Claims 28, 34 and 42 as being unpatentable over Roulin et al (U.S. Patent No. 5,508,075) in view of Harfmann (U.S. Patent No. 5,681,865) and Nankee et al (U.S. Patent No. 4,543,364) and further in view of The Encyclopedia of Polymer Science and Engineering (Volume 12, page 214, 1985) above are directed to amended Claims 18 – 21, 23 – 24, 28, 30 – 34, 36, 38 – 43.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.
Marc Patterson
Art Unit 1772

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

7/12/04